APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/528,697	03/17/2000	Robert Beach	A32894-072797.0127	5223

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EXAMINER
HOANG, THAI D

ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	**Applicant(s)**
Office Action Summary	09/528,697	BEACH, ROBERT
	Examiner	**Art Unit**	
	Thai D Hoang	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendmend filed on 11/15/2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *28-36 and 59-69* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *59 and 69* is/are allowed.

6)☒ Claim(s) *28-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 28-36 and 59-69 are rejected under 35 U.S.C. 102(e) as being

unpatentable over Panasik, US Patent No. 6,590,884 B1, in view of Belanger et al., US

Patent No. 5,875,186, hereinafter referred to as Panasik, Belanger respectively.

1.1   Regarding claims 28 and 32, Panasik discloses a method and apparatus

providing spatial diversity within an indoor network. The system disclosed by Panasik

comprising a plurality of RF access points (APs) 18, 20 and 70, network interface 24,

wherein the access points transmit a received data from the interface 24 through a

backbone 22 to the mobile user 12, and transmit a received data from the mobile user

12 to the network interface 24 by using Ethernet protocol; figures 1-2. Also, in figures 4

and 5, Panasik discloses the system comprises a phase alignment block 122 wherein

each data string is decoded 124 to reveal the specific multiple access point 70 from

which the data string originated. Return data to the Network backbone 22 for other

computers is transmitted via communications link 132. The purpose of the phase

alignment block 122 is to provide a reference point for the data strings 118 and 120

input from access points 101-102; col. 5, line 51-col. 6, line 51. Moreover, Panasik

teaches that each mobile user is assigned an access point based on the quality of the

signal; col. 3, lines 52 – col. 4, line 2 (providing signals formatted according to high level

of MAC functions over the wired network to said wired network interface, said signals

having wireless address data and message data within a data packet addressed to said

RF port; operating said processor to provide wireless data signals having said wireless

signal format for said address data and said message data to said RF module;

operating said RF module to transmit said wireless data signals as an RF signal.

The system disclosed by Panasik inherently comprises a MAC processor (or

MAC interface), which is inherently included low level and high level functions, for

performing functions of the data link layer (layer 2 of OSI) in order to transmit and

receive data to/from mobile user 12 and Ethernet through physical layer (layer 1) and

network layer (layer 3). One of ordinary skill in the art must know this comprising. Some

references are cited in this office action to help clearly understand (wherein the RF port

is configured to perform low level medium access control (MAC) functions and wherein

the wired network comprises at least one of a physical entity and a logical entity to

perform high level MAC functions)

Panasik does not disclose the APs operate to receive ACK signal from the

mobile user, and to cause APs to retransmit data to the mobile units if the ACK signal is

not received. However, Belanger discloses a dynamic wireless local area network.

Belanger discloses that if an ACK frame not being received by the source unit indicates

that either the DATA frame was damaged or that the ACK frame itself was damaged. In

either case, the source unit must retransmit the entire MAC protocol data unit (MPDU);

col. 16, lines 23-27; col. 18, lines 11-45; col. 14, lines 48-50. It would have been obvious

to one of ordinary skill in the art at the time the invention was made to apply ACK signal

disclosed by Belanger into Panasik's system in order to improve quality of service in the

network.

1.2   Regarding claims 29, 33-34 and 66, Panasik discloses that the system comprises

a plurality of RF access points 18, 20 and 70, network interface 24, wherein the access

points comprises a transceiver 104 for transmitting an received data from the interface

24 through a backbone 22 to the mobile user 12, and transmitting a received data from

the mobile user 12 to the network interface 24 by using Ethernet protocol; fig.1-4; col. 4,

lines 13-32, lines 46-54 (A method for transmitting signals having a wireless signals

format using an RF port having an Ethernet interface, a data processor and an RF

module, comprising providing an Ethernet data packet to said Ethernet interface, said

Ethernet data packet encapsulating as data a data message having said wireless signal

format, operating said data processor to provide said data message to said RF module,

and operating said RF module to transmit said data message as an RF signal).

The system disclosed by Panasik inherently comprises a MAC processor (or

MAC interface), which is inherently included low level and high level functions, for

performing functions of the data link layer (layer 2 of OSI) in order to transmit and

receive data to/from mobile user 12 and Ethernet through physical layer (layer 1) and

network layer (layer 3). One of ordinary skill in the art must know this comprising. Some

references are cited in this office action to help clearly understand (wherein the RF port

is configured to perform low level medium access control (MAC) functions and wherein

the wired network comprises at least one of a physical entity and a logical entity to

perform high level MAC functions)

Panasik does not disclose the APs operate to receive ACK signal from the

mobile user, and to cause APs to retransmit data to the mobile units if the ACK signal is

not received. However, Belanger discloses a dynamic wireless local area network.

Belanger discloses that if an ACK frame not being received by the source unit indicates

that either the DATA frame was damaged or that the ACK frame itself was damaged. In

either case, the source unit must retransmit the entire MAC protocol data unit (MPDU);

col. 16, lines 23-27; col. 18, lines 11-45; col. 14, lines 48-50. It would have been obvious

to one of ordinary skill in the art at the time the invention was made to apply ACK signal

disclosed by Belanger into Panasik's system for advantage cited above with respect to

claim 28.

1.3   Regarding claims 30, 35, 62 and 67, Panasik does not disclose that the system

performs a cyclic redundancy computation on the data message and adding the result

thereof to the data message. However, Belanger discloses the system uses CRC code

for checking error; col. 8, line 7 and 52; col. 9, lines 7-8; col. 12, lines 11-12; col. 13,

lines 30-31, 45-46, 61-62. It would have been obvious to one of ordinary skill in the art

at the time the invention was made to apply CRC method into the system disclosed by

Panasik in order to improve the quality of the data signal because the error could be

quickly detected.

1.4   Regarding claims 31, 36, 63 and 68, the system disclosed by Panasik comprises

a phase alignment block 122 for controlling RF access points; fig. 4-5; col. 3, lines 52 –

col. 4, line 2 (comprising operating said data processor to control said radio module.)

1.5   Regarding claims 60-61 and 64-65, Panasik does not explicitly disclose the

system uses IEEE 802.11 standard. However, Belanger discloses that the IEEE 802.11

standard is applied in the system; col. 31, lines 59-61. It would have been obvious to

one of ordinary skill in the art at the time the invention was made to apply IEEE 802.11

standard into Panasik's system for economic reason, since it could be adapted with

conventional Wireless LAN systems used in the networks.

Allowable Subject Matter

Claim 59 and 69 are allowed.

The prior art does not teach or fairly suggest the features as argued in the

remarks, page 3, lines 4-17, filed on 11/15/2004.

Response to Arguments

Applicant's arguments with respect to claims 28-29 and 32-33 have been

considered but are moot in view of the new ground(s) of rejection.

Regarding claims 28-29 and 32-33, in the remarks, Applicant argues "neither

reference describes data transmission/receiving methods in which a simplified RF port

communicates with a mobile unit using low level MAC functions, and transmits/receives

data signals from a wireless network which performs higher level MAC functions,"

Examiner respectfully disagrees. As explained above with respect to claim 1, The

system disclosed by Panasik inherently comprises a MAC processor (or MAC interface),

which is inherently included low level and high level functions, for performing functions

of the data link layer (layer 2 of OSI) in order to transmit and receive data to/from mobile

user 12 and Ethernet through physical layer (layer 1) and network layer (layer 3).

Conclusion

The following references are cited to further show the state of the art with respect

to the application:

US Patent No. 6,665,536 B1, Mahany discloses, "Local area network having

multiple channel wireless access."

US Patent No. 5,907,544 A, Rypinski discloses "Hub controller architecture and

function for a multiple access-point wireless communication network."

US Patent No. 5,850,526 A, Chou discloses "LAN station for determining the

destination LAN station is capable of decompressing by comparing destination address

to block of addresses assigned by a LAN manufacturer."

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Thai D Hoang whose telephone number is The

Examiner can normally be reached on Monday-Friday 10:00am-18:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Thai Hoang

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